

XXXVII.—*On Birds collected by Mr. C. Boden Kloss, F.R.G.S., M.B.O.U., on the Coast and Islands of South-eastern Siam.* By H. C. ROBINSON, M.B.O.U., C.M.Z.S. *With Field-Notes by the Collector.*

THE collection of birds made by Mr. Kloss on the coast of south-eastern Siam, bordering the French possession of Cambodia, and on the adjacent islands appears worthy of record in detail, on account of the poverty of the literature on, and specimens from, this region.

With the exception of the series collected by the French traveller Mouhot in much the same area as that covered by Mr. Kloss, I am aware of no specimens in English Museums. Mouhot's birds, moreover, were never listed, though the reptiles and mammals secured by him formed the subject of reports by Drs. Gray and Günther in the 'Proceedings of the Zoological Society of London,' while one or two of his birds were cursorily described by the Marquis of Tweeddale.

Owing to the fact that the collection of birds was only a secondary object of Mr. Kloss's expedition, the series obtained is not very large either in numbers of specimens or in species; but, nevertheless, several specimens of considerable interest as bearing on zoogeographical problems were secured. Amongst these may be mentioned *Zosteria marginata*, *Anthocinclu phayrii*, and *Myiophoneus eugenii*, species characteristic of the evergreen forests of the Salwin and Tenasserim, which are unknown in the alluvial plain of Siam proper, but which have, nevertheless, circled the headwaters of the Menam and reappeared on its eastern border. *Myiophoneus klossii* and *Pyrotrogon erythrocephalus klossii* are both distinct and interesting new forms, while *Setaria rufifrons* adds another to the small group of species known from Siam, Java, and occasionally Borneo, but unrepresented in the Malay Peninsula and Sumatra.

Cyornis pallidipes hainana is an unexpected addition to the fauna, while it is surprising to find that the local Dial Bird belongs to the Malayan race, *Copsychus saularis musicus*

(Raffles), and not to the typical Indian form, which is the one met with in Siam proper.

I have reduced the synonymy to the narrowest limits possible, in most cases merely giving the reference to the 'British Museum Catalogue' (quoted as Cat.); to Count Nils Gyldenstolpe's paper, "Birds collected by the Swedish Zoological Expedition to Siam, 1911-1912," published in the *Kongl. Svenska Vetenskaps-Akademiens Handlingar*, Band 50, No. 8, 1913 (quoted as Gyldenstolpe); and to Stuart Baker's work on 'Indian Pigeons and Doves,' 1913 (quoted as Stuart Baker). The classification and nomenclature are those of Sharpe's Hand-list, unless otherwise stated.

Note on the localities visited, by Mr. Boden Kloss.

Towards the end of 1914 I spent a couple of months' vacation-leave in making a collection of vertebrates in Siam.

After a few days in Bangkok I proceeded by steamer with three Dyak collectors to Chantabun, and there, hiring a native sailing-boat, passed six weeks in cruising and camping on the coast and islands to the south-east, getting in altogether about 33 working days ashore.

Island races of mammals were the principal object of the excursion, as the bird population of the smaller islands, on which a good deal of the time was passed, was, as usual in similar situations, of the poorest. The ornithological results are therefore not as complete as they might have been, had attention been paid to birds primarily, but they serve to show that our knowledge of the avifauna of this part of Indo-China is, as pointed out by Mr. Robinson, who has kindly taken the account of the birds off my hands, by no means final. The mainland specimens were the result of ten days' collecting at four stations along a fifty-mile strip of coast, each of the camps being situated near a village surrounded by clearings with forest near at hand, so that the scrub and the jungle fauna are both represented.

Koh Chang, an island on which I camped for eight days,

is about 15 miles long and 7 wide. It is very hilly, and its highest peak, one of a number, rises to 2446 feet. Wherever possible the coastal area has been cleared and planted with cocoa-nuts, rice, and vegetables; there exists also a certain amount of old cultivated land which has lapsed into scrub or forms grazing fields for buffalo. The strait which separates it from the mainland is only four fathoms deep, and the western entrance narrows to a breadth of three miles, though, as much of the Chantabun province is an alluvial plain of recent formation, the island was once much more isolated and probably stood in deeper water. It is northernmost of the little archipelago.

Koh * Kut (where a week was spent), 15 miles S.S.E. of this and about 18 miles from the land to the eastwards, is the southern island of the group and stands just within the ten-fathom contour line; it is some 13 miles long by 5 wide, elevated, and has a peak of 1171 feet. It is uninhabited, but swarms with ticks, which made our week's sojourn on it a most uncomfortable experience, and is covered with forest to the water's edge, as are the islands between it and Koh Chang, with the exception of Koh Mak, which is about 4 miles long; this is low, and is being turned into a cocoa-nut plantation.

The remaining five islands visited, none of them more than a couple of miles in length, are all hilly and, other than Koh Rang, which is the most seaward of the group and stands in 12 or 13 fathoms of water, rise from depths of four to eight fathoms only. Only a day or two was given to each of these.

On the mainland, Lem Ngop lies within the Koh Chang strait and Ok Yam (or Jam) is eastward of the centre of Koh Kut; it is just within French territory, as the present boundary between Siam and Cambodia comes out on the coast half a mile to the west of it. Klong Yai and Klong Menao are places to the north of Ok Yam.

* Ko, Koh, Kaw (Siamese)=Island.

*Systematic List.***Tropicoperdix chloropus.**

Arboricola chloropus Tickell ; Ogilvie-Grant, Cat. xxii. 1893, p. 219.

Tropicoperdix chloropus Gyldenstolpe, p. 66.

a. ♀. Klong Menao *, S.E. Siam. 12 Jan., 1915.

“Bill olive; feet pale dull yellowish green. The only specimen obtained was caught by the head in a rat-trap baited with cocoa-nut.”—C. B. K.

Gallus gallus.

Gallus gallus (Linn.) ; Ogilvie-Grant, Cat. xxii. 1893, p. 344.

Gallus ferrugineus Gm. ; Gyldenstolpe, p. 67.

a, b. 1 ♂ imm., 1 ♀. Klong Menao, S.E. Siam., 11 Jan., 1915.

Male. “Iris hazel; bare head-skin deep fleshy pink, a blue-white neck-patch; bill horny, lower mandible paler; feet dark stone-grey. *Female.* Iris hazel; bare head-skin deep fleshy; bill horny; feet dark stone-grey.

“A third example, a young cock-bird, which was bought freshly trapped, became perfectly tame in two or three days. It was taken alive to Bangkok, where it attached itself to a flock of domestic fowls.”—C. B. K.

Turnix blanfordi.

Turnix blanfordi Blyth ; Ogilvie-Grant, Cat. xxii. 1893, p. 542.

a. ♀ imm. Ok Yam, Franco-Siamese Boundary (on coast). 2 Jan., 1915.

“Upper mandible horny, lower dull yellow; tarsi yellow, toes brown.”—C. B. K.

Treron curvirostra nipalensis.

Treron nipalensis (Hodgs.) ; Salvad. Cat. xxi. 1893, p. 34 ; Gyldenstolpe, p. 65 ; Stuart Baker, 1914, p. 66, pl. v.

* This name is not shown on Admiralty charts, but it refers to the river-mouth two miles north of Kao Hua Maew (Cat's Head Hill).

a. 1 ♀. Koh Kut I.*, S.E. Siam. 30 Dec., 1914.

b. 1 ♂. Ok Yam, Franco-Siamese Boundary (on coast).
2 Jan., 1915.

“*Male*. Iris light yellow; orbital skin pale apple-green; bill pale greenish ivory, nostrils and gape crimson; feet carmine. *Female*. Iris orange; bill pale greenish ivory, cere and base of lower mandible crimson; feet carmine, soles yellowish.

“Found at Ok Yam in association with the common green pigeon, but in much smaller numbers.”—C. B. K.

Stuart Baker states that the bird from the northern parts of the Malay Peninsula belongs to this continental race, while that from the southern portions is to be referred to the typical form *T. curvirostra curvirostra*, whose type locality appears to be Sumatra. The series in the F. M. S. Museums bears out his contention in the main, though it is to be noted that while skins from Pelarit in Perlis and from Bandon, collected in October and May, belong to the northern form, others from Trang, to the north of the former locality, dated December and January, are of the southern race.

It is perhaps not generally recognised that species both of the *Treroninae* and *Ptilopodinae* perform local migrations, sometimes apparently of considerable extent. The present species is noteworthy in this respect, and is often found at some distance out to sea in the Straits of Malacca. On Feb. 15, 1915, we picked up at sea, in the middle of the straits about 30 miles from the Selangor coast and about 40 from Sumatra, a male which had dropped into the water so recently that its plumage was practically dry. Both this species and *Ptilinopus jambu* frequently alight on ships at sea in the Straits of Malacca, while *Ducula badia*, normally an inhabitant of the high mountains only, sometimes frequents the mangroves on the coast, in order, as the Malays

* I have given all the localities of my insular specimens as “Island” on the labels. Though the word “Koh” has that meaning, few people are familiar with the Siamese language and I have preferred rather to be redundant than obscure.—C. B. K.

say, to drink the salt water. Until more, therefore, is known of local migrations and the routes followed, it is dangerous to dogmatise on apparent differences in the races inhabiting adjacent land areas separated only by narrow belts of sea.

Osmotreron bicincta domvillii.

Osmotreron domvillii Swinh. Ibis, 1870, p. 354.

Osmotreron bicincta (Jerd.); Salvad. (part.) Cat. xxi. 1893, p. 57.

Treeron bicincta domvillii Hartert, Nov. Zool. xvii. 1910, p. 193.

Osmotreron bicincta domvillii Stuart Baker, p. 48.

a. 1 ♂. Ok Yam, Franco-Siamese Boundary (on coast). 3 Jan., 1915.

The single specimen noted appears to belong to this form; the grey nuchal patch is decidedly less extensive than is the case in a small series from the Malay Peninsula with which I have compared it. Wing 149 mm.

“Shot in company with *O. vernans*.”—C. B. K.

Osmotreron vernans.

Osmotreron vernans (Linn.); Salvad. Cat. xxi. 1893, p. 60; Stuart Baker, p. 59.

a, b. 1 ♂, 1 ♀. Koh Chang I., S.E. Siam. 5–11 Dec., 1914.

c-f. 3 ♂, 1 ♀. Ok Yam, Franco-Siamese Boundary (on coast). 1–3 Jan., 1915.

g. 1 ♀. Lem Ngop, S.E. Siam. 15 Jan., 1915.

“Male: Iris yellow, reddish yellow, or inner ring blue, outer lilac; feet pale plumbeous, cere greenish, feet maroon. Female: Iris pale purple (mauve); bill, tip pale plumbeous, base yellowish green; feet maroon.

“Extremely common at Ok Yam, where it frequented the single, and small clumps of, trees dotted about the common land surrounding the village.”—C. B. K.

Differs neither in size nor colour from Malayan specimens.

Carpophaga ænea.

Carpophaga ænea (Linn.); Salvad. Cat. xxi. 1893, p. 190; Gyldenstolpe, p. 66; Stuart Baker, p. 91, pl. vii.

- a, b.* 1 ♂, 1 ♀. Koh Kut I., S.E. Siam. 26–27 Dec., 1914.
c, d. 1 ♂, 1 ♀. Koh Rang I., S.E. Siam. 21 Dec., 1914.
e. ? Koh Mehsi, East I.*, S.E. Siam. 13 Dec., 1914.
f, g. 1 ♂, 1 ♀. Koh Klum I., S.E. Siam. 17–18 Dec., 1914.

“Iris crimson, eyelids dull red; bill plumbeous blue, base of culmen and nostrils plum-red; feet plum-coloured.

“Very common on all the islands visited, where the loud booming note was heard all day long.”—C. B. K.

The dimensions of this series, compared with that of specimens from the Malay Peninsula, are rather small; the bird from Koh Klum (wing 209 mm.) is especially so and is more richly coloured, the top of the head being more vinaceous.

Streptopelia suratensis tigrina.

Turtur tigrinus (Temm. & Knip); *Salvad. Cat.* xxi. 1893, p. 440; *Gyldenstolpe*, p. 66.

Streptopelia suratensis tigrina Stuart Baker, p. 210, pl. xxi.

a. 1 ♀. Koh Mak I., S.E. Siam. 20 Dec., 1914.

b. 1 ♂. Ok Yam, Franco-Siamese Boundary (on coast). 5 Jan., 1915.

“Iris flesh or yellow; bill black; feet plum-coloured.

“Probably introduced on Koh Mak, which is inhabited and being turned into a cocoa-nut plantation.”—C. B. K.

Chalcophaps indica.

Chalcophaps indica (Linn.); *Salvad. Cat.* xxi. 1893, p. 515; *Gyldenstolpe*, p. 66; *Stuart Baker*, p. 121, pl. xi.

a. 1 ♀. Koh Mehsi, West I., S.E. Siam. 14 Dec., 1914.

“Orbital skin grey, the edges of the eyelids plum-colour; bill coral-red, base plum-coloured; feet livid plum.”—C. B. K.

Stuart Baker’s figure of the female is decidedly inaccurate, as the forehead is never so devoid of grey as is shown in the drawing.

* The two islands of Koh Mehsi, West and East, are shown respectively on Admiralty charts as “Ile du Pic” and “Le Chameau,” but I have preferred to use the names by which they are known locally.

Amaurornis phœnicura chinensis.

Amaurornis phœnicura (Forst.); Sharpe, Cat. xxiii. 1894, p. 156; Gyldenstolpe, p. 68.

Amaurornis phœnicura chinensis (Bodd.); Stresemann, Nov. Zool. xx. 1913, p. 304.

a. 1 ♂. Klong Yai, S.E. Siam. 6 Jan., 1915.

“Bill dull green, the cere brownish; feet olive-brown, tarsi tinged yellow.”—C. B. K.

Rallina superciliaris.

Rallina superciliaris (Eyton); Sharpe, Cat. xxiii. 1894, p. 76.

a. 1 ♂. Ok Yam, Franco-Siamese Boundary (on coast). 3 Jan., 1915.

“Iris ochraceous; bill brownish black, base of lower mandible yellowish; feet brownish black.”—C. B. K.

Sarcogrammus indicus atrinuchalis.

Sarcogrammus atrinuchalis Blyth; Sharpe, Cat. xxiv. 1896, p. 152; Gyldenstolpe, p. 68.

a. 1 ♀. Ok Yam, Franco-Siamese Boundary (on coast). 2 Jan., 1915.

b. 1 ♀. Klong Yai, S.E. Siam. 5 Jan. 1915.

“Iris crimson; orbital skin and wattles carmine; bill, proximal half carmine, distal half black; feet olive-yellow, tarsi dull yellow.

“Frequently seen stalking about on the buffalo grazing ground.”—C. B. K.

Totanus calidris.

Totanus calidris (Linn.); Sharpe, Cat. xxiv. 1896, p. 414.

a, b. 1 ♂, 1 ♀. Klong Yai, S.E. Siam. 5 Jan., 1915.

“Iris dark; bill sooty, base of lower mandible orange-brown; feet dull orange.”—C. B. K.

Tringoides hypoleucus.

Tringoides hypoleucus (Linn.); Sharpe, Cat. xxiv. 1896, p. 456; Gyldenstolpe, p. 69.

a. 1 ♂. Klong Yai, S.E. Siam. 6 Jan., 1915.

“Bill brown; feet stone-grey.”—C. B. K.

Glottis nebularius.

Glottis nebularius (Gunner); Sharpe, Cat. xxiv. 1896, p. 480; Gyldenstolpe, p. 70.

a. 1 ♂. Klong Yai, S.E. Siam. 5 Jan., 1915.

"Iris dark; bill, proximal half plumbeous, distal black; feet stone-grey."—C. B. K.

A rather small specimen, having the tarsus 2.25 and the culmen 2.0 inches.

Ardea sumatrana.

Ardea sumatrana Raffles; Sharpe, Cat. xxvi. 1898, p. 68.

a. 1. Koh Mehsi, West I., S.E. Siam. 15 Dec. 1914.

"Iris yellow; bill black, tip of lower mandible yellow, the base fleshy; feet and lower tarsi brownish black, legs and upper tarsi brownish black and yellow, the front part darkest."—C. B. K.

Demiegretta sacra.

Demiegretta sacra (Gm.); Sharpe, Cat. xxvi. 1898, p. 136.

a. 1 ♂. Koh Klum I., S.E. Siam. 17 Dec., 1914.

b. 1 ♀. Koh Kra I., S.E. Siam. 15 Dec., 1914.

"Iris yellow; upper mandible brownish black, lower greyish brown, tip dull yellowish; feet olive-yellow, front of tarsi and tibiæ black, soles bright yellow."—C. B. K.

Both these Reef-Herons are in the grey phase, which along the shores of the Malay Peninsula and Indo-China is by far the commonest.

Ardeola bacchus.

Ardeola bacchus (Bp.); Sharpe, Cat. xxvi. 1898, p. 211; Gyldenstolpe, p. 73.

a. 1 ♂. Koh Mak I., S.E. Siam. 20 Dec., 1914.

"Iris yellow; orbital skin bright yellow-green; upper mandible black, lower dull greenish yellow, tip black; feet bright yellow-green."—C. B. K.

In winter plumage this species is rather difficult to distinguish from its near ally, *A. grayi* (Sykes), which is found more or less in the same regions; the present species is, however, rather the larger of the two, appearing to have the wing always rather more than 9.0 inches.

Accipiter gularis.

Astur gularis Temm. & Schleg. in Siebold's Faun. Japon., Aves, 1844, p. 5, pl. ii.

Accipiter gularis Hartert, Nov. Zool. xvii. 1910, p. 211.

a. ♀ ad. Klong Yai, S.E. Siam. 4 Jan., 1915.

b. ♂ ad. Ok Yam, Franco-Siamese Boundary (on coast). 3 Jan., 1915.

"*Male*. Iris orange, bill plumbeous horny; feet yellowish, tarsi olive-tinged. *Female*. Iris yellow; bill horny grey, cere yellowish green; feet greenish yellow."—C. B. K.

Partly from their migratory habits and partly from the fact that adult birds form only a small proportion of the skins available in collections, the sparrow-hawks of this group are some of the most difficult of birds to identify satisfactorily.

A recent study of Malayan and Sumatran-Malayan material has led me independently to the same conclusions as those come to by Hartert in the article above quoted on the Birds of Hainan (Nov. Zool. xvii. pp. 208-212).

Of the pair listed the female has the wing 192 mm., the upper surface brownish grey, the head darker and greyer with the feathers of the nape white at the base. The throat is white, unbarred, with a fine dark median hair-line. The whole under surface from the throat down, including the thighs, is regularly barred white and pinkish liver-brown. The under tail-coverts are pure white. The fourth primary is longest, the third nearly equal to it, and the fifth considerably shorter. The male has the wing 163 mm., the upper surface pure grey, darker on the head, the tail with three not very distinct dark bands and a terminal band; middle of the throat with a broad ashy-grey median stripe; throat and upper breast pinkish brown, with ill-defined greyish longitudinal stripes on the sides. Lower breast and abdomen barred white and pinkish brown, the thigh barred with white and greyish brown, the under tail-coverts pure white. Fourth primary longest, not much exceeding the third and fifth, which are subequal.

Accipiter affinis.

Accipiter virgatus, subsp. *affinis*, Gurney, List of Diurn. Birds of Prey, 1884, pp. 39, 168-73.

Accipiter affinis Hartert, Nov. Zool. xvii. 1910, p. 211.

a. ♂ imm. Koh Kut I., S.E. Siam. 30 Dec., 1914.

b. ♂ imm. Koh Rang I., S.E. Siam. 21 Dec., 1914.

a. "Iris ochraceous, eyelid edge greenish yellow; bill slaty horn, cere and gonyes yellowish green; feet dull yellow.

b. "Iris yellow, orbital skin greenish; bill bluish horn, cere apple-green; feet greenish yellow."—C. B. K.

These birds are both immature, as is shown by the pale edgings to the feathers of the upper surface, which is dark brown, with a greyish tinge, the head much darker. Three rather broad clearly defined dark bars on the tail and a dark tip. Throat white, with a somewhat broad dark median streak. Crop-region with broad longitudinal stripes of dark brown. Rest of the under surface broadly barred with reddish brown, the bars more marked on the flanks. Thighs regularly barred with white and reddish brown. Under tail-coverts white or slightly flecked with reddish brown. Fourth primary longest, third nearly equal to it, fifth rather shorter. Wing 165, 166 mm.

There is little doubt that these two specimens represent the Himalayan *A. affinis* in winter quarters. Specimens precisely agreeing with them except in size have been shot in considerable numbers on small islands in the Straits of Malacca, in company, however, with adult birds with little or no barring on the under surface, that can with difficulty be separated from the true Sundaic *A. virgatus*.

Pernis cristatus.

Pernis cristatus Cuvier, Règne Anim. i. 1829, p. 335.

Pternis ptilonorhynchus (Temm.); Sharpe, Cat. i. 1874, p. 347.

a. 1 ♂. Lem Ngop, S.E. Siam. 14 Jan., 1915.

"Iris hazel; bill plumbeous horny; feet dull yellow."—C. B. K.

This appears to be a fully adult male, the crest being black, about an inch long, the feathers white at the bases. Colour above brownish black, darker on the head; sides of the head grey, paler on the lores, chin dark grey, throat black; rest of under surface dark brown, the bases of the feathers white. Tail with three greyish-white bars and a narrow tip, the two upper bars narrow. Wing 16·9 in.

Spilornis cheela rutherfordi.

Spilornis rutherfordi Swinh. Ibis, 1870, p. 85.

Spilornis cheela (part.), Sharpe, Cat. i. 1874, p. 287; Blanford, Faun. Brit. Ind., Birds, iii. 1895, p. 357.

Spilornis cheela rutherfordi Gyldenstolpe, p. 62.

a. ♀ vix ad. Koh Mak I., S.E. Siam. 19 Dec., 1914.

“Iris lemon; orbital skin and cere lemon; bill plumbeous horny; feet lemon, claws black.”—C. B. K.

This bird is somewhat immature, having the ends of the secondaries broadly and the feathers of the upper wing-coverts and back narrowly tipped with white. Chin and throat brown, and breast obscurely undulated, but not distinctly barred. Wing about 16·5 inches, decidedly larger than specimens from the south of the Malay Peninsula, but about the same size as those from Trang and Bandon. *S. c. rutherfordi* and *S. c. pallidus* Walden grade into each other.

Ketupa ketupa.

Ketupa ketupa (Horsf.); Sharpe, Hand-l. i. 1899, p. 281.

Ketupa javanensis Less.; Sharpe, Cat. ii. 1875, p. 8; Gyldenstolpe, p. 61.

a, b. 1 ♂, 1 ♀. Ok Yam, Franco-Siamese Boundary (on coast). 1–3 Jan., 1915.

“Iris yellow; bill plumbeous horny; feet dirty white.”—C. B. K.

The male is somewhat richly coloured, with the stripes on the breast rather broad, but can be matched in both these respects by specimens from the Malay Peninsula.

Palæornis fasciata.

Palæornis fasciata (P. L. S. Müll.); Salvad. Cat. xx. 1891, p. 464; Gyldenstolpe, p. 60.

a, b. 2 ♂. Ok Yam, Franco-Siamese Boundary (on coast). 3 Jan., 1915.

c. 1 ♂ imm. Lem Ngop, S.E. Siam. 14 Jan., 1915.

“*Adult male.* Iris lemon; bill, upper mandible blood-red with yellow tip, lower mandible sooty black; feet olive. *Immature male.* Iris yellowish white; bill sooty, the base of the upper mandible red; feet olive.

“Common in open country dotted with trees and on the outskirts of woodland, where it flew about in noisy flocks. Also observed in the groves of *Casuarinas* fringing the shore.”—C. B. K.

Loriculus vernalis.

Loriculus vernalis (Sparrm.); Salvad. Cat. xx. 1891, p. 517; Gyldenstolpe, p. 60.

a-d. 3 ♂, 1 ♀. Lem Ngop, S.E. Siam. 14 Jan., 1915.

“Iris white; feet orange; bill blood-red.”—C. B. K.

Eurystomus orientalis orientalis.

Eurystomus orientalis (Linn.); Sharpe, Cat. xvii. 1892, p. 33; Gyldenstolpe, p. 52.

a. 1 ♂. Ok Yam, Franco-Siamese Boundary (on coast). 3 Jan., 1915.

“Iris dark; bill and foot orange-red.”—C. B. K.

This specimen, with a culmen of about 28 mm. round the curve and a wing of 196, with but little suffusion of deep blue on the black of the tail and inner secondaries, appears to belong to the southern resident race *E. o. orientalis*, and not to the northern migratory form, *E. o. calonyx* Sharpe, which also occurs in the same districts.

Alcedo ispida bengalensis.

Alcedo ispida bengalensis (Gm.); Gyldenstolpe, p. 54.

Alcedo ispida (Linn.); Sharpe, Cat. xvii. 1892, p. 141.

a, b. 1 ♂, 1 ♀. Koh Klum I., S.E. Siam. 17 Dec., 1914.

c. 1 ♀ imm. Koh Mehsi, East I., S.E. Siam. 13 Dec., 1914.

“*Male*. Iris dark; bill black; feet coral-red. *Female*. Iris dark; bill sooty, gape and base of lower mandible red-brown; feet red, washed with brown.”—C. B. K.

Pelargopsis gural burmanica.

Pelargopsis burmanica Sharpe; Sharpe, Cat. xvii. 1892, p. 104; Gyldenstolpe, p. 54.

Ramphalcyon capensis burmanica Oberholser, Proc. U.S. Nat. Mus. xxxv. 1911, p. 670.

a. ♂. Klong Yai, S.E. Siam. 6 Jan., 1915

b, c. ♂ ♀. Koh Chang I., S.E. Siam. 4-6 Dec., 1914.

“Iris dark, edge of eyelids red; bill blood-red, tip and part of culmen brownish black; feet coral-red, claws horn.

“Lives in the mangroves fringing the coast and river-estuaries. A wary bird with a loud alarm-note.”—C. B. K.

These specimens, none of which is very old, as is shown by the dark edgings to the feathers of the breast, appear to belong to this race, which is separated from the Malayan form by its slightly larger size and by the greenish-blue tint of the wings and back, and by the paler clay-coloured pileum slightly washed with a greenish suffusion. The colour of the under surface does not differ. Specimens from Koh Pennan, off Bandon, are intermediate between this race and *P. g. malaccensis*, but are nearer the latter.

Halcyon chloris.

Halcyon chloris (Bodd.) ; Sharpe, Cat. xvii. 1892, p. 273, pl. vii. fig. 3.

Halcyon chloris, subsp. *armstrongi* Sharpe, tom. cit. p. 277, pl. vii. fig. 1.

Halcyon humii Sharpe, tom. cit. p. 281, pl. viii.

a, b. 1 ♂, 1 ♀. Klong Yai, S.E. Siam. 4-6 Jan., 1915.

“Iris dark; basal two-thirds of lower mandible fleshy white; feet pale blackish purple or blackish olive.”—C. B. K.

The larger the series of these blue and white Kingfishers

from the Indo-Malayan region that are examined, the more it is borne in on one that no more than one species can be maintained. Of the above two specimens one is an almost typical *H. armstrongi*, while the other is typical *H. humii*.

Though the species in a wide sense covers a very large area, it must be remembered that it is with hardly any exceptions a purely coastal form which is rarely found at any distance from the sea. The whole area of distribution may therefore be regarded as practically continuous, in that no barrier of even so much as a hundred miles of sea intervenes between the most widely separated localities inhabited by the species. It is, therefore, quite illogical to divide the species into several local races, and then call in the theory of migration to explain the undoubted fact that two or more of the forms are frequently found existing side by side.

Halcyon smyrnensis fusca.

Halcyon smyrnensis fusca (Bodd.); Hartert, Nov. Zool. xvii. 1910, p. 215; Gyldenstolpe, p. 54.

Halcyon smyrnensis (Linn.); Sharpe, Cat. xvii. 1892, p. 222.

a. 1 ♀. Koh Chang I., S.E. Siam. 6 Dec., 1914.

“Iris dark; bill blood-red; feet blood-red, washed with brown.”—C. B. K.

Halcyon pileata.

Halcyon pileata (Bodd.); Sharpe, Cat. xvii. 1892, p. 229; Gyldenstolpe, p. 55.

a. ♂ ad. Klong Yai, S.E. Siam. 6 Jan., 1915.

b. ♂ ad. Ok Yam, Franco-Siamese Boundary (on coast). 2 Jan., 1915.

“Iris dark; bill blood-red; feet brownish red.”—C. B. K.

Carcinectes pulchellus.

Carcinectes pulchellus (Horsf.); Sharpe, Cat. xvii. 1892, p. 198.

a. 1 ♀. Klong Menao, S.E. Siam. 11 Jan., 1915.

“Iris dirty white; bill sealing-wax red; feet dull greenish yellow.”—C. B. K.

This specimen is much more rufous orange above than a series of specimens from the Malay Peninsula, though it is approached in this respect by one skin from Langkawi. The irregular black markings on the breast are also more spare, and the size is very slightly larger.

The species does not appear to have been previously recorded from east of the Salwin watershed.

Dichoceros bicornis.

Dichoceros bicornis (Linn.); Ogilvie-Grant, Cat. xvii. 1892, p. 355; Gyldenstolpe, p. 55.

a, b. 2 ♂. Koh Chang I., S.E. Siam. 7-10 Dec., 1914.

c, d. 1 ♂, 1 ♀. Koh Kra I., S.E. Siam. 17 Dec., 1914.

“*Male.* Iris, inner ring silver-white, outer mottled with brown; orbital skin pale brownish yellow. Bill, upper mandible gamboge, washed with red at the tip, back end of casque blood-red; lower mandible ivory-white, tip tinged with yellow, base black. Feet olive, tarsi and soles washed with yellowish. Culmen and top of casque washed with pale red.

“*Female.* Similar to the male, but the base and front of the casque and a line on the culmen reaching half way to the tip black.

“In life the casque and bill of this Hornbill are coated with a bright yellow oil, and the neck and the white bars on the wings are stained with the same secretion which, with its colour, entirely disappears after death wherever exposed to light.

“Pairs of small flocks of this bird were frequently seen flying between the islands and the mainland—a journey involving a sea-crossing of five or six miles.

“The flesh of this species, like that of all eastern Hornbills, provides excellent food.”—C. B. K.

Rhytidoceros undulatus.

Rhytidoceros undulatus (Shaw); Ogilvie-Grant, Cat. xvii. 1892, p. 382.

a. 1 ♂. Koh Kut I., S.E. Siam. 24 Dec., 1914.

b, c. 1 ♂, 1 ♀. Klong Yai, S.E. Siam. 7 Jan., 1915.

“*Male.* Iris pale hazel-red; orbital skin dull fleshy pink.

Bill pale olive ivory, corrugations ivory brown, base dull red. Feet black. Gular skin Indian yellow, gular band black.

“*Female*. Iris hazel-yellow, inner ring lemon; orbital skin deep dull pink. Bill ivory, concavities of corrugations brown, base of casque brown, base of bill olive. Feet black, back of tarsi and toes grey. Gular skin turquoise and violet mottled, gular band black.

“Also observed on Koh Chang, but nowhere as common as the previous species.”—C. B. K.

Anthracoceros albirostris.

Anthracoceros malabaricus (Gm.); Ogilvie-Grant, Cat. xvii. 1892, p. 366; Robinson & Kloss, Ibis, 1911, p. 35.

Anthracoceros albirostris (Shaw & Nodder); Gyldenstolpe, p. 55.

Anthracoceros fraterculus Elliot, Ann. Mag. Nat. Hist. (5) i. 1878, p. 85.

a. 1 ♀. Koh Mehsi, West I., S.E. Siam. 14 Dec., 1914.

b. 1 ♀. Klong Yai, S.E. Siam. 4 Jan., 1915.

“Iris brown; orbital skin bluish in front, pinkish white behind, cheek-skin white, post-orbital skin blue. Bill yellowish ivory and black, a patch on the sides Vandyke brown. Feet leaden.

“A noisy little Hornbill, its cries sounding like the yapping of an angry puppy. Only single individuals were met with.”—C. B. K.

Both these specimens are very small, but are matched by specimens from Trang and Langkawi in the north of the Malay Peninsula.

Melittophagus swinhoii.

Melittophagus swinhoii (Hume); Sharpe, Cat. xvii. 1892, p. 56; Gyldenstolpe, p. 53.

a-c. 2 ♂, 1 ♀. Koh Chang I., S.E. Siam. 5-6 Dec., 1914.

d-f. 2 ♀, 1 ♂. Ok Yam, Franco-Siamese Boundary (on coast). 2-3 Jan., 1915.

g. 1 ♂. Klong Menao, S.E. Siam. 11 Jan., 1915.

"Iris crimson; bill black; feet leaden brown. (Common in open country.)"—C. B. K.

Caprimulgus macrurus ambiguus.

Caprimulgus macrurus ambiguus Hartert, Ibis, 1896, p. 373; Gyldenstolpe, p. 57.

a. ♀ vix ad. Ok Yam, nr. Franco-Siamese Boundary (on coast). 1 Jan., 1915.

"Iris dark; bill fleshy, tip black; feet fleshy brown. Observed also on Koh Chang, but nowhere common."—C. B. K.

Not differing from Malay Peninsula specimens.

Lyncornis cerviniceps.

Lyncornis cerviniceps (Gould); Hartert, Cat. xvi. 1892, p. 604; Robinson & Kloss, Ibis, 1911, p. 38.

a-c. 1 ♂, 2 ♀. Klong Yai, S.E. Siam. 7 Jan., 1915.

"Iris dark; bill horny pink; feet dull blackish purple.

"Appears in this part of Siam largely to replace the smaller *Caprimulgi*; about Klong Yai village it was very common at dusk, but I never remember hearing it utter any kind of cry."—C. B. K.

Not hitherto recorded eastward of the Salwin watershed.

Pyrotrogon erythrocephalus.

Harpactes erythrocephalus Gould; Ogilvie-Grant, Cat. xvii. 1892, p. 488; Gyldenstolpe, p. 57.

a. 1 ♀. Klong Menao, S.E. Siam. 11 Jan., 1915.

"Iris dark; orbits and cheek-skin violet; bill cobalt; culmen, tips, and edges black; feet purplish fleshy."—C. B. K.

I can detect no differences between this single female and a series of the same sex from the hills of the Malay Peninsula. The size is apparently slightly less.

Pyrotrogon erythrocephalus klossi, subsp. nov.

A race of *P. erythrocephalus* distinguished at a glance from the typical form by the brilliance of its colouring, the red parts of the plumage lacking all tinge of crimson-lake, while the chestnut parts are clearer and less ochraceous.

Adult male (type of the subspecies). Head, throat, and upper breast "Spectrum red" (Ridgway, 'Colour Standards and Nomenclature,' Washington, 1912, pl. i.) as against "Egenia red" (pl. xiii.), the belly and under tail-coverts "scarlet red" against "Rose Dorée" (pl. 1). Mantle, back, upper tail-coverts, and middle tail-feathers decidedly lighter than in *P. erythrocephalus*.

Adult female. Differing from the typical female in the more scarlet, less pink abdomen and in the lighter tint of the upper surface, the head especially being more ochraceous and less russet.

Dimensions:—*Male*. Total length, 290; wing, 135; tail, 177; bill from gape, 27.5 mm.

Female. Total length, 295; wing, 134; tail, 177; bill from gape, 27 mm.

"*Male*. Iris reddish hazel; bill pale plumbeous, tip black; gape and orbital skin violet-blue; feet pinkish plumbeous.

"*Female*. Iris bright hazel; bill plumbeous blue, tip black; gape and orbital skin bright violet; feet bluish fleshy.

"Although Koh Chang is only three miles from the nearest part of the mainland, I was very much surprised to find a Trogon present. With its shade-haunting proclivities and weak powers of flight it is almost the last bird one expects to meet with on an island."—C. B. K.

a-c. 1 ♂, 2 ♀. Koh Chang I., S.E. Siam. 6 Dec., 1914.

There is little doubt that these specimens represent a perfectly distinct race of this widespread Trogon, which can be recognised at a glance when the fresh skins are compared with recent skins of the allied forms, though the differences in tint are difficult to express in words.

Pyrotrogon oreskios.

Harpactes oreskios Temm.; Ogilvie-Grant, Cat. xvii. 1892, p. 494; Gyldenstolpe, p. 57.

a. 1 ♂. Klong Menao, S.E. Siam. 11 Jan., 1915.

"Iris dark, edge of eyelid cobalt; bill cobalt; culmen and edge of upper mandible black; feet dull cobalt."—C. B. K.

Exactly like Malayan specimens.

Rhopodytes tristis hainanus.

Rhopodytes tristis hainanus Hartert, Nov. Zool. xvii. 1910, p. 218; Robinson & Kloss, Ibis, 1911, p. 42; Gyldenstolpe, p. 58.

a, b. 2 ♀. Koh Kut I., S.E. Siam. 29, 30 Dec., 1914.

c. ♂. Ok Yam, Franco-Siamese Boundary (on coast). 3 Jan., 1915.

d. ♂. Klong Menao, S.E. Siam. 11 Jan., 1915.

“Iris dark or brown; orbital skin deep crimson; bill dark apple-green; feet sooty or dark plumbeous, tarsi greenish slate.”—C. B. K.

These specimens agree well with each other and with specimens from various parts of the Malay Peninsula southwards from Trang, and are undoubtedly to be referred to the race from Hainan described by Hartert.

Eudynamis honorata.

Eudynamis honorata (Linn.); Shelley, Cat. xix. 1891, p. 316; Gyldenstolpe, p. 58.

a, b. 1 ♂ imm., 1 ♀ imm. Koh Mak I., S.E. Siam. 20 Dec., 1914.

c. 1 ♂ ad. Koh Rang I., S.E. Siam. 21 Dec., 1914.

“Iris crimson; bill greenish horn or dull plumbeous green; feet plumbeous or greenish blue. For some reason or other a common bird on small islands.”—C. B. K.

The young male is in the plumage of the adult female, while the specimen marked as female is much more black and white than the adult birds of that sex, having the nape almost uniform glossy black, with the white tips and shaft-stripes much reduced.

Thereiceryx phæostriata.

Cyanops phæostriata (Bp.); Shelley, Cat. xix. 1891, p. 76.

Cyanops faiostriata saigonensis Neumann, Bull. Brit. Orn. Club, xxiii. 1908, p. 31.

a-e. 2 ♂, 2 ♀. Ok Yam, Franco-Siamese Boundary (on coast). 2-3 Jan., 1915.

“Iris hazel; upper mandible black, the base grey, the lower mandible grey, the tip black; feet greyish olive.

“Fairly numerous in the trees dotting the common land surrounding Ok Yam village.”—C. B. K.

These five specimens do not in any way bear out Prof. Neumann's diagnosis, having the wing over 112 mm. and the culmen about 28·5 mm., and I therefore do not think it advisable to split up the species. Moreover, there is no evidence to show that the Saigon and Cambodian form is not the typical race.

Mesobucco duvaugli orientalis, subsp. nov.

Allied to *M. d. cyanotis* (Blyth) from Tenasserim and the north of the Malay Peninsula, but somewhat larger in size, and paler in general coloration, the red subocular spot much intermixed with pale golden or straw-yellow.

Wing, 83–84; bill from gape, 27·0–28·5 mm.

Adult male (type of the subspecies). Collected at Ok Yam, Franco-Siamese Boundary (on coast), 1 Jan., 1915, by C. Boden Kloss.

a-e. 2 ♂, 2 ♀. Ok Yam, Franco-Siamese Boundary (on coast). 1–2 Jan., 1915.

f, g. 1 ♂, 1 ♀. Koh Chang I., S.E. Siam. 5–10 Dec., 1914.

“Iris dark; orbital skin leaden; bill black, lower mandible pale plumbeous at the base; feet yellowish olive, claws black.”—C. B. K.

Gecinus vittatus.

Gecinus vittatus (Vieill.); Hargitt, Cat. xviii. 1890, p. 46.

a, b. 1 ♂, 1 ♀. Klong Menao, S.E. Siam. 8 Jan., 1915.

“Irides reddish brown or crimson; orbital skin olive; bill black or sooty, lower mandible except the tip greenish yellow; feet olive.”—C. B. K.

These specimens seem a little larger, wing about 5·4 inches in the male, than any of a considerable series from the Malay Peninsula from Pulau Langkawi, south to the Lingga Archipelago. The green of the lateral stripes on the feathers of the breast and flanks is also darker and the white shaft-area of the feathers narrower. The section of the species inhabiting Indo-China seems quite cut off from that found

in the Malay Peninsula, Sumatra, and Java, as the species inhabiting the north-west of the Malay Peninsula at Trang and Junk Zeylon and the north-east at Patani and Bandon is the allied but perfectly distinct *G. viridanus* (Blyth).

***Gecinulus viridis*.**

Gecinulus viridis Blyth ; Hargitt, Cat. xviii. 1896, p. 136.

a. 1 ♀. Klong Yai, S.E. Siam. 6 Jan., 1915.

“Bill pale greyish white; feet olive-green.”—C. B. K.

This Woodpecker, which is common in Burma and Tenasserim and in many parts of the Malay Peninsula, south to Selangor, does not appear to have been recorded hitherto east of the Salwin.

***Chrysocolaptes gutticristatus indo-malayicus*.**

Chrysocolaptes gutticristatus (Tick.) ; Hargitt, Cat. xviii. 1898, p. 47; Robinson & Kloss, Ibis, 1911, p. 47.

Chrysocolaptes gutticristatus indo-malayicus Hesse ; Gyldenstolpe, p. 49.

a, b. 1 ♂, 1 ♀. Koh Chang I., S.E. Siam. 11 Dec., 1914.

c. 1 ♂. Koh Klum I., S.E. Siam. 18 Dec., 1914.

d. 1 ♂. Koh Rang I., S.E. Siam. 21 Dec., 1914.

“Iris orange or orange-yellow; bill sooty or leaden olive; feet leaden or dark olive. The only Woodpecker met with on the islands but not observed anywhere on the mainland. Also seen on Koh Mak.”—C. B. K.

Tickell's type came from somewhere in north Tenasserim about the centre of the range of the species, which extends from the Sikkim Himalayas to the south of the Malay Peninsula. As is repeatedly the case in this region, northern birds are larger and duller and southern birds smaller and brighter, and both have received names, viz., *C. sultaneus* (Gould) for birds from Assam and *C. indo-malayicus* for birds from north Malay Peninsula. The case is a curious one of interest to trinomialists. Most modern ornithologists would admit that valid subspecific differences exist between the extremes *C. sultaneus* from the north and *C. indo-malayicus* from the south-east. Owing to the fact that a median

specimen has been first described, we are placed in the awkward dilemma of having to admit either one race only of three, in which latter case the range of subspecific variation in each of the subspecies from the typical form is only half of what it would have been if the type had happened to come from either extreme. So the trinomialist is forced either to become a lumper against his convictions, or to split on even finer distinctions that he usually considers sufficient.

Iyngipicus canicapillus.

Iyngipicus canicapillus (Blyth) ; Hargitt, Cat. xviii. 1890, p. 322 ; Gyldestolpe, p. 48.

a. 1 ♂. Klong Yai, S.E. Siam. 7 Jan., 1915.

“ Iris ochreous ; bill horny, lower mandible grey ; feet dull olive.”—C. B. K.

This specimen has the four central rectrices spotted, not uniform, as is the case with many northern birds which have been separated as *I. pumilus* (Hargitt, Ibis, 1881, p. 599).

Cymborhynchus macrorhynchus.

Cymborhynchus macrorhynchus (Gm.) ; Hume & Davison, Stray Feath. vi. 1878, p. 92.

Eurylemus lemniscatus Raffles, Trans. Linn. Soc. xiii. 1822, p. 296.

Cymborhynchus malaccensis Salvad. Atti R. Accad. Sci. Tor. ix. 1874, p. 425.

Cymbirhynchus macrorhynchus lemniscatus Hartert, Nov. Zool. ix. 1902, p. 206.

a, b. ♂ ♀. Klong Yai, S.E. Siam. 7 Jan., 1915.

“ Iris emerald ; bill turquoise-blue, tinged green on the culmen and tomia, lower mandible deep yellow edged with turquoise ; feet cobalt.”—C. B. K.

Excluding the Aracan subspecies *C. m. affinis* Blyth, which in its smaller size and red-tipped tertials stands apart from the other forms, many authorities have divided the Rouge-et-Noir Broadbills inhabiting the Indo-Malayan region into

two races, basing their distinction on the amount of white on the tail-feathers.

The typical race, founded on Latham's Great Billed Tody is supposed to have little or no white in the tail and to be confined to Borneo, while the form inhabiting Sumatra and the Malay Peninsula north to Tenasserim and Siam has the outer webs of the three outer tail-feathers with white on the inner webs. For this race the earliest name available is *E. lemniscatus* Raffles, founded on specimens from "the interior of Sumatra," probably inland from Bencoolen.

Hume (*loc. cit.*) has pointed out that in regard to continental specimens, these differences are not constant, there being great variation in the amount of white on the tail in the series examined by him. Four specimens from the west coast of Sumatra, which are practically topotypes of *E. lemniscatus*, have in two cases practically no white on the tail, while in the other two it is much less than in most Malayan specimens, though these can be matched by a specimen from Parit, central Perak. Most Bornean specimens have traces of white, though in the majority the white is small in extent, often little more than a pale patch, and does not extend to more than two pairs of feathers.

On the face of the evidence before us we should be forced to regard the typical race *C. m. macrorhynchus* as occurring in both Borneo and western Sumatra, while the continental form, to which the name *C. m. malaccensis* Salvad. would have to be applied, would inhabit the mainland and east and south Sumatra. Possibly this is really the case, as west Sumatra, west of the main range, is much older land than the east and south of the island, in which districts the fauna is almost purely Malaccan with no distinctive species. The more obvious course is to regard the differential characters as so unstable and plastic as not to justify separation of the species into geographical races on their account.

The above Siamese specimens, which are both young, have the white spots on the tail distinctly tinged with ochreous, which is apparently not due to stain.

Pitta cyanea.

Pitta cyanea Blyth; Sclater, Cat. xiv. 1888, p. 417.

a. 1 ♂. Klong Menao, S.E. Siam. 12 Jan., 1915.

“Iris dark; bill black; feet lilac fleshy.”—C. B. K.

Not hitherto recorded east of the Salwin River.

Anthocincla phayrii.

Anthocincla phayrii Blyth; Bingham, Stray Feath. ix. 1880, pp. 177, 494; Sclater, Cat. xiv. 1888, p. 413.

a. 1 ♂. Ok Yam, Franco-Siamese Boundary (on coast). 3 Jan., 1915.

b-f. 4 ♂. 1 ♀. Klong Menao, S.E. Siam. 10-12 Jan., 1915.

“Iris dark; bill black; feet fleshy, tarsi washed with brown.”—C. B. K.

The female differs from the male in having the mesial streak on the head and the two lateral streaks from behind the ear-coverts dull brown, not glossy jet-black.

This species again has not hitherto been recorded from east of the Salwin.

Hirundo rustica gutturalis.

Hirundo rustica gutturalis Scop.; Sharpe, Cat. x. 1885, p. 134.

Chelidon rustica gutturalis Gyldenstolpe, p. 41.

a. 1. Ok Yam, Franco-Siamese Boundary (on coast). 3 Jan., 1915.

“Iris dark; bill and feet black.”—C. B. K.

Alseonax latirostris.

Alseonax latirostris (Raffles); Sharpe, Cat. iv. 1879, p. 127; Oates, Faun. Brit. Ind., Birds, ii. 1890, p. 35.

a, b. 1 ♂, 1 ♀. Koh Chang I., S.E. Siam. 10 Dec., 1914.

c. 1 ♀. Klong Menao, S.E. Siam. 9 Jan., 1915.

“Iris dark; bill black, base of the lower mandible dull yellowish; feet black.”—C. B. K.

A winter visitor to almost all parts of the Indo-Malayan and Indo-Chinese regions.

Muscitrea grisola.

Pachycephala grisola (Blyth); Gadow, Cat. viii. 1881, p. 220.

Muscitrea grisola Oates, Fann. Brit. Ind., Birds, ii. 1890, p. 30; Robinson & Kloss, Ibis, 1911, p. 54; Robinson, Journ. Fed. Malay States Mus. v. 1915, p. 148.

a. 1 ♂. Koh Klum I., S.E. Siam. 18 Dec., 1914.

b. 1 ♀. Koh Rang I., S.E. Siam. 21 Dec., 1914.

"Iris dark; upper mandible sooty, lower horny; feet dull plumbeous."—C. B. K.

Widely distributed in the coastal zone of the Indo-Malayan and Indo-Chinese regions but rarely, if ever, found at any distance from the fringing mangrove belt.

Cyornis banyumas tickelliae.

Siphia tickelliae Blyth; Sharpe, Cat. iv. 1879, p. 417.

Cyornis tickelli Gyldenstolpe, p. 37.

a. 1 ♂. Koh Klum I., S.E. Siam. 18 Dec., 1914.

b, c. 1 ♂, 1 ♀. Koh Rang I., S.E. Siam. 21 Dec., 1914.

"Iris dark; bill black; feet bluish pink, plumbeous brown, or dull lilac."—C. B. K.

These specimens have the wing about 73 mm., considerably larger than Gyldenstolpe's specimens, which are possibly referable to some other form.

C. sumatrensis, from the Malay Peninsula, which is smaller again, with a pure white belly and under tail-coverts, is only a subspecies of this species, with which it evidently intergrades.

Cyornis pallidipes hainana.

Siphia hainana Ogilvie-Grant, P. Z. S. 1900, p. 480.

Siphia pallidipes hainana Hartert, Nov. Zool. xvii. 1910, p. 225.

a. 1 ♂. Klong Menao, S.E. Siam. 12 Jan., 1915.

"Iris dark; bill black; feet pinkish blue."—C. B. K.

This specimen evidently belongs to the form described from Hainan. It has the wing 70.5 and the tail 61 mm. and is not quite adult, though practically so.

Hypothymis azurea cæruleocephala.

Hypothymis azurea prophata Oberholser; Gyldenstolpe, p. 37.

a-e. 3 ♂, 2 ♀. Koh Chang I., S.E. Siam. 5-8 Dec., 1914. Wing, ♂ 71-73; ♀ 71-72 mm.

f-k. 4 ♂, 2 ♀. Koh Kut I., S.E. Siam. 24-29 Dec., 1914. Wing, ♂ 72-74; ♀ 71.5-73 mm.

l, m. 1 ♂, 1 ♀. Klóng Menao, S.E. Siam. 10 Jan., 1915. Wing, ♂ 72; ♀ 71 mm.

"Iris dark; orbital skin cobalt; bill cobalt; feet slaty blue."—C. B. K.

Oberholser, *more americano*, has divided the species generally known as *H. azurea* into a multitude of races on which, in the absence of his specimens, it is impossible to express an opinion in the majority of cases. It may be noted, however, that his material, though collectively very considerable, does not often comprise large series from the separate areas and that many of his races are founded on very limited numbers of specimens. Distinctions founded on dimensions are apt to break down when large series are accumulated.

Other features relied on, such as the extent of the black on the crown and the size of the black neck-gorget, are much affected by the "make" of the skin, while the tint of blue on the upper and lower surface is very largely influenced by the age of the plumage, as is shown by the very large series of Malayan specimens available in the F.M.S. Museums.

Dealing with the present series, I have referred them to *H. a. cæruleocephala* on account of the purer white tint of the flanks and centre of the abdomen, which are more tinged with bluish grey in Malayan specimens of *A. a. prophata* Oberholser. The series from the different islands differ slightly *inter se*, those from Koh Kut having a more distinct black gorget in the male, while the throats of the females are brighter blue than in those from the mainland or from Koh Chang.

I do not, however, care to add other names to the already sufficiently extensive list of subspecies.

Terpsiphone affinis.

Terpsiphone affinis Blyth ; Sharpe, Cat. iv. 1879, p. 349 ; Robinson & Kloss, Ibis, 1911, p. 53 ; Robinson, Journ. Fed. Malay States Mus. v. 1915, pp. 99, 148.

a. 1 ♂ ad. Koh Chang I., S.E. Siam. 11 Dec., 1914.

b. 1 ♀ imm. Klong Menao, S.E. Siam. 9 Jan., 1915.

“*Adult male.* Iris dark ; eyelids, bill, and feet plumbeous blue. *Immature female.* Iris dark ; bill pale lilac blue, tip black, lower mandible yellow tinged with lilac ; feet slaty blue.”—C. B. K.

Chloropsis chlorocephala.

Chloropsis chlorocephala (Wald.) ; Sharpe, Cat. vi. 1881, p. 28 ; Robinson & Kloss, Ibis, 1911, p. 55 ; Gyldenstolpe, p. 23.

a. 1 ♀. Klong Menao, S.E. Siam. 12 Jan., 1915.

“Iris dark ; bill black, base of lower mandible plumbeous ; feet pale plumbeous.”—C. B. K.

Irena puella puella.

Irena puella (Lath.) ; Sharpe, Cat. vi. 1881, p. 177 ; Gyldenstolpe, p. 23.

a-c. 3 ♂. Koh Chang I., S.E. Siam. 5-11 Dec., 1914.

d-f. 3 ♂. Koh Kut I., S.E. Siam. 23-30 Dec., 1914.

g, h. 1 ♂, 1 ♀. Koh Mchsi, East I., S.E. Siam. 13 Dec., 1914.

i. 1 ♀. Koh Klum I., S.E. Siam. 18 Dec., 1914.

j-l. 1 ♂, 1 ♂ imm., 1 ♀. Ok Yam, Franco-Siamese Boundary (on coast). 2 Jan., 1915.

m. 1 ♂. Klong Menao, S.E. Siam. 11 Jan., 1915.

“*Male.* Iris crimson or carmine ; bill and feet black. *Female.* Iris hazel or brown ; bill and feet black.”—C. B. K.

All this series shows very distinctively the characters of the northern race of the species, having both upper and under tail-coverts falling short of the tip of the tail by considerably more than the length of the tarsus. Young males which have not yet assumed the adult dress can apparently be distinguished from the females by their deeper, less greenish tint with a decided gloss on the edges of the upper tail-coverts.

Criniger ochraceus.

Criniger ochraceus Moore, Cat. B. E. I. Comp. Mus. 1854, p. 252; Hartert, Nov. Zool. ix. 1902, p. 559.

Criniger gutturalis (part.) Sharpe, Cat. vi. 1881, p. 80.

Criniger sordidus Richmond, Proc. U.S. Nat. Mus. xxii. 1900, p. 320; Robinson & Kloss, Ibis, 1911, p. 57.

a-d. 3 ♂, 1 ♀. Koh Chang I., S.E. Siam. 5-6 Dec., 1914.

e, f. 2 ♂. Koh Kut I., S.E. Siam. 27-30 Dec., 1914.

g. 1 ♂. Klong Yai, S.E. Siam. 6 Jan., 1915.

h. 1 ♂. Klong Menao, S.E. Siam. 11 Jan., 1915.

"Iris ochreous, hazel or dark brown; upper mandible dark plumbeous, horny or sooty, lower mandible plumbeous or plumbeous blue; feet brownish fleshy, soles yellow."

—C. B. K.

Both Mr. Richmond in describing and Mr. Kloss and myself in admitting *C. sordidus* failed to recognise the fact that the type of *C. ochraceus* was obtained by Helfer in Tenasserim, probably in the central or southern districts, and that consequently, if any difference exists between the northern race and the southern Peninsular form, it is the latter that will have to receive a name. On comparing the present series of eight skins and others from Trang, Perlis, and Bandon, including one of the typical specimens of *C. sordidus*, with a large series from the Federated Malay States, I find that the only differences to be noted are a slightly richer tint of yellowish ochraceous brown on the lower tail-coverts in the northern specimens, and a more pronounced white throat, more clearly defined from the rest of the under parts, in the southern specimens. In the latter also the sides of the breast are more ashy grey. The race is perhaps sufficiently distinct to merit separation, and it may, therefore, be designated as :

Criniger ochraceus sacculatus, subsp. nov.

Range. Southwards from the north of Perak to the south of the Malay Peninsula, generally at considerable elevations, especially in the south of its range.

Type. Adult female. F.M.S. Museum, No. 1172/08. Collected at Genting Bidai, Selangor, 2300 ft., 14 May, 1908.

Pycnonotus finlaysoni.

Pycnonotus finlaysoni (Strickl.); Sharpe, Cat. vi. 1881, p. 144; Gyldenstolpe, p. 26.

a. 1 ♂. Klong Yai, S.E. Siam. 2 Jan., 1915.

b. 1 ♀. Ok Yam, Franco-Siamese Boundary (on coast). 2 Jan., 1915.

“Iris dark; bill black; feet sooty. A bird of the open country.”—C. B. K.

Otocompsa flaviventris.

Otocompsa flaviventris (Tick.); Sharpe, Cat. vi. 1881, p. 161; Gyldenstolpe, p. 25.

a-e. 4 ♂, 1 ♀. Koh Chang I., S.E. Siam. 5–6 Dec., 1914.

f-j. 4 ♂, 1 ♀. Koh Kut I., S.E. Siam. 20–29 Dec., 1914.

k. 1 ♀. Ok Yam, Franco-Siamese Boundary (on coast). 2 Jan., 1915.

“Iris pale lemon; bill black; feet dark brown.

“The commonest Bulbul in south-east Siam and the islands. Where only forest existed it inhabited the tops of the higher trees, but wherever clearings and scrub occurred it deserted the forest for them.”—C. B. K.

Garrulax diardi.

Garrulox diardi (Less.); Sharpe, Cat. vii. 1883, p. 437; Gyldenstolpe, p. 20.

a-d. 2 ♂, 2 ♀. Lem Ngop, S.E. Siam. 15 Jan., 1915.

“Iris crimson or brown; bill black; feet dark-brown.

“Occurring in open country, where it was common in clumps of trees among cultivation.”—C. B. K.

Pomatorhinus nuchalis.

Pomatorhinus nuchalis Tweedd.; Sharpe, Cat. vii. 1883, p. 411; Harington, Journ. Nat. Hist. Soc. Bombay, xxiii. 1914, p. 332.

a, b. 1 ♂, 1 ♀. Klong Yai, S.E. Siam. 6 Jan., 1915.

c. 1? Klong Menao, S.E. Siam. 11 Jan., 1915.

“ Iris ochreous or pinkish yellow; bill ivory-white; culmen and nostril sooty; feet leaden, soles dull yellow.”

—C. B. K.

As far as can be judged without direct comparison, these specimens are quite typical examples of *P. nuchalis*, for which these localities form a very considerable extension of range. The species found in south-western Siam, in Bandon and Trang, is *P. olivaceus* Blyth, which differs in having the chestnut on the sides confined to a patch on the sides of the neck.

Pellorneum subochraceum.

Pellorneum subochraceum Swinh.; Sharpe, Cat. vii. 1883, p. 521; Robinson & Kloss, Ibis, 1911, p. 59; Gyldenstolpe, p. 21; Robinson, Journ. Fed. Malay States Mus. v. 1915, pp. 103, 149.

a. 1 ♀. Koh Chang I., S.E. Siam. 5 Dec., 1914.

“ Iris dark; orbital skin greenish yellow; upper mandible sooty, lower mandible with the base yellowish, the tip pale plumbeous; feet fleshy yellow.”—C. B. K.

Somewhat darker, with the stripes on the breast rather broader than in the majority of specimens from the Malay Peninsula; the differences, however, are not constant.

Setaria rufifrons.

Malacopteron rufifrons Cab. Mus. Hein. i. 1850, p. 65.

Malacopteron lepidoccephalum (Gray); Sharpe, Cat. vii. 1883, p. 567.

a-c. 2 ♂, 1 ♀. Klong Menao, S.E. Siam. 10 Jan., 1915.

“ Iris brown; bill blackish, the lower mandible grey; feet pinkish grey.”—C. B. K.

The occurrence of this species in Siam adds another to the group of vertebrates which are found in Siam, Java, and occasionally Sumatra but which do not occur in the Malay Peninsula. Though I have not been able to compare the above three birds with specimens from Java or Sumatra, they conform exactly with the descriptions and agree also in dimensions.

Turdinus abbotti.

Turdinus abbotti (Blyth) ; Sharpe, Cat. vii. 1883, p. 541 ; Ogilvie-Grant, Journ. Fed. Malay States Mus. iii. 1908, p. 29.

Turdinus abbotti olivaceum (Strickl.) ; Hartert, Nov. Zool. ix. 1902, p. 562.

a-k. 4 ♂, 7 ♀. Koh Kut I., S.E. Siam. 21-29 Dec., 1914.

l, m. 1 ♂, 1 ♀. Klong Menao, S.E. Siam. 9-11 Jan., 1915.

"Iris ochreous ; bill horny black, lower mandible pale grey ; feet fleshy.

"Extremely common on Koh Kut, skulking about in the undergrowth of the forest."—C. B. K.

This considerable series is very uniform, and when compared with a series of over thirty specimens from various parts of the Malay Peninsula may be said to differ on an average in having the flanks and under tail-coverts a richer ochraceous rufous, as is noted for northern specimens by Hartert (*loc. cit.*). A word of warning from the field-ornithologists to those whose only experience is with cabinet specimens is perhaps necessary in this respect. Many species of Timeline birds with rufous or brown, or greyish brown, in the plumage, change tint with unexampled rapidity when converted into skins, greys and browns becoming less greyish and more snuffy brown, while rufous browns fade rapidly.

These skins from Siam, when laid out with the available material from more southern localities in the Malay Peninsula, are noticeably brighter and richer in tint and are so noted at the present moment. I have very little doubt, however, that, if in the course of the next two years or so a large series from the vicinity of Kuala Lumpur was brought in and compared with the present series, I myself, or the average observer, would note that there was no recordable difference between the two groups, or that, if anything, the southern group was the brighter. It is also a significant fact that, when a recently collected series of birds is worked out, the average differences noted are nearly always in the direction

of brighter tints in the more recently collected birds. More importance, therefore, than is commonly the case should be accorded to this factor, the importance of which is by no means realized by home workers, who, moreover, rarely deal with the bulk of material that is often available to local students.

Myiophoneus eugenii.

Myiophoneus eugenii Hume ; Sharpe, Cat. vii. 1883, p. 9.
a. 1 ♂. Koh Chang I., S.E. Siam. 7 Dec., 1914.

"Iris dark ; bill gamboge-yellow ; culmen and nostrils sooty ; feet black."—C. B. K.

Quite typical of this species, without any pale markings on the wing-coverts. Wing, 163 ; tail, 128 ; tarsus, 53 ; bill from gape, 43 mm.

Myiophoneus klossii, sp. nov.

Related to *M. eugenii*, but smaller, and having the lores and a patch on the throat pure white.

Adult male. General colour dark blue with a slight purplish cast as in other species of the genus ; feathers of the upper surface with paler glistening tips. Lores, feathers in front of the eye, and a narrow periocular ring white, the feathers with ill-defined black tips. Beneath dark blue, the feathers with lilac-blue glistening tips, lightest and most pronounced on the upper breast, more bluish on the belly. A large silky white patch in the centre of the lower throat. All the feathers of the lower surface with pure white bases most extensive on the flanks. Angle of the wing lighter ultramarine blue, all the feathers with strongly marked lilac-blue glistening tips, the median and greater wing-coverts without light tips. Outer median under wing-coverts largely white. Total length, 268 ; wing, 152 ; tail, 118 ; tarsus, 47 ; bill from gape, 39 mm.

"Iris dark brown ; bill dull yellow ; nostrils and culmen sooty ; feet black."—C. B. K.

Type. Adult male, collected on Koh Mehsi, West I., S.E. Siam on 14 Dec., 1914 by C. Boden Kloss.

At first sight one might be inclined to regard this bird as a partially albinistic specimen of *M. eugenii*. That this is

not the case is shown by the light colouring of the angle of the wing, by the smaller dimensions, and by the symmetry of the white markings. From *M. crassirostris* of Traug and Langkawi it is separable by the much slenderer bill and by the much darker ground colouring, and from *M. temmincki* by the absence of pale spots on the median under wing-coverts.

Mixornis gularis rubricapilla.

Mixornis rubricapilla (Tick.); Sharpe, Cat. vii. 1883, p. 578; Gyldenstolpe, p. 21.

a-c. 1 ♂, 2 ♀. Koh Chang I., S.E. Siam. 5 Dec., 1914.

d. 1 ♂. Koh Rang I., S.E. Siam. 21 Dec., 1914.

e. 1 ♂. Koh Kut I., S.E. Siam. 25 Dec., 1914.

f. 1 ♂. Klong Menao, S.E. Siam. 12 Jan., 1915.

"Iris white tinged with brown, yellow-ochre, yellow, or ochreous; upper mandible black, sooty or leaden, lower mandible plumbeous; feet yellowish olive."—C. B. K.

As Hume has already observed, there is a perfect gradation between the Sumatran and Malayan *M. gularis*, with heavily striped throat, rich chestnut head, and the back and external aspect of the wings brown, and the Himalayan and Burmese *M. rubricapilla* with the streaks on the throat reduced to shaft-stripes, the chestnut on the head much paler, and the back and external aspect of the wing greenish olive. As noted elsewhere, the meeting place of the two forms is the southern provinces of Siam in the Malay Peninsula, specimens from Bandon and the adjacent islands being exactly intermediate.

The present series are typical *M. g. rubricapilla*.

Zoothera marginata.

Geocichla marginata Seebohm, Cat. v. 1881, p. 162; Oates, Faun. Brit. Ind., Birds, ii. 1890, p. 157.

a, b. 1 ♂, 1 ♀. Klong Yai, S.E. Siam. 7 Jan., 1915.

"Iris dark; bill black, lower mandible horny; feet brown."—C. B. K.

Monticola gularis.

Monticola gularis (Swinh.); Seebohm, Cat. v. 1881, p. 326; Hartert, Vög. pal. Faun. i. 1910, p. 673.

a. 1 ♀ imm. Klong Menao, S.E. Siam. 11 Jan., 1915.

“Iris dark; bill brown, base of lower mandible fleshy; feet deep fleshy.”—C. B. K.

This extremely rare Rock-Thrush, which breeds in northern and eastern Siberia and northern China, appears to winter in Indo-China, and is occasionally, though rarely, met with in the Malay Peninsula. The present specimen is quite immature and has the upper surface earthy-brown with no tinge of bluish-grey, but is undoubtedly referable to this species.

The dimensions are: wing, 94; tail, 69; tarsus, 24 mm.

Monticola solitarius philippensis.

Monticola cyanus solitaria Seebohm, Cat. v. 1881, p. 318.

Monticola solitarius philippensis Hartert, Vög. pal. Faun. i. 1910, p. 675; Gyldenstolpe, p. 40.

a. 1 ♂. Koh Klum I., S.E. Siam. 17 Dec., 1914.

b. 1 ♀. Koh Kra I., S.E. Siam. 17 Dec., 1914.

c. 1 ♂. Lem Ngop, S.E. Siam. 15 Jan., 1915.

“Iris dark; bill leaden black or black; feet black or sooty. The two island specimens came from the rocks of the shore, that from Lem Ngop was shot on the top of the white-painted wooden lighthouse, where it had a regular perching spot.”—C. B. K.

Birds from the Malay Peninsula or Indo-China are very variable, some specimens having no chestnut whatever in the pelage, while in others almost the entire abdomen, axillaries, and under wing- and tail-coverts are chestnut-red. Probably both the western form *M. solitarius solitarius* and the eastern *M. s. philippensis* winter in the region. Nearly all the birds met with are more or less immature.

Geocichla innotata.

Geocichla innotata Blyth; Seebohm, Cat. v. p. 176; Robinson & Kloss, Ibis, 1911, p. 63.

a-e. 4 ♂, 1 ♀. Koh Kut I., S.E. Siam. 23-30 Dec., 1914.

“Iris dark ; upper mandible black, lower, tip black, base plumbeous ; feet fleshy yellow.”—C. B. K.

This species does not appear to have been recorded from Siam or the more eastern countries of Indo-China. The present series is perfectly typical and shows no traces of the white wing-bar which distinguishes *G. citrina* from the present bird.

At Trang in western Siam both species occurred during the winter months, but *G. citrina* was in the large majority.

Turdus obscurus.

Merula obscura (Gm.); Seebohm, Cat. v. 1881, p. 273.

Turdus obscurus Hartert, Vög. pal. Faun. i. 1910, p. 656.

a. 1 ♂ imm. Ok Yam, Franco-Siamese Boundary (on coast). 2 Jan., 1915.

“Iris dark ; upper mandible brown, lower yellow, the tip brown ; feet brownish yellow.”—C. B. K.

A winter visitor to Indo-China and the Malay Peninsula, apparently only on passage in the latter country.

Kittacincla macrurus macrurus.

Turdus macrurus Gm. Syst. Nat. i. 1789, p. 820.

Cittocinclla tricolor (Vicill.) ; Sharpe, Cat. v. 1881, p. 85 (part.).

Kittacincla macrurus macrurus Hartert, Nov. Zool. ix. 1902, p. 572.

Cittocinclla macrura Gyldenstolpe, p. 39.

a. 1 ♂. Koh Chang I., S.E. Siam. 9 Dec., 1914.

b. 1 ♂. Koh Klum I., S.E. Siam. 17 Dec., 1914.

c. 1 ♂. Koh Kut I., S.E. Siam. 17 Dec., 1914.

d. 1 ♂. Koh Kra I., S.E. Siam. 17 Dec., 1914.

e. ♂. Klong Menao, S.E. Siam. 12 Jan., 1915.

“Iris dark ; bill black ; feet fleshy.”—C. B. K.

The type of this race came from Pulau Condor. The present specimens are practically identical with birds from the Malay Peninsula, but the chestnut of the lower surface is very slightly paler.

Copsychus saularis musicus.

Lanius musicus Raffles, Trans. Linn. Soc. xiii. 1821, p. 307.

Copsychus saularis (Linn.); Sharpe, Cat. vii. 1883, p. 61; Hartert, Nov. Zool. xvii. 1910, p. 234; Gyldenstolpe, p. 39. a. 1 ♂. Klong Menao, S.E. Siam. Jan., 1915.

Gyldenstolpe states that his specimens of the Dial Bird from north and central Siam all belong to the Indian form *C. saularis saularis* (Linn.), in which the under wing-coverts and axillaries are almost entirely white.

Mr. Kloss' example, however, agrees perfectly with skins from the Malay Peninsula and Sumatra in having the under wing-coverts and axillaries largely black, thus agreeing with *C. s. musicus*, which was originally described from Sumatra.

Acrocephalus bistrigiceps.

Acrocephalus bistrigiceps Swinh.; Seebohm, Cat. v. 1881, p. 94; Hartert, Vög. pal. Faun. i. 1909, p. 565; Robinson, Journ. Fed. Malay States Mus. v. 1915, p. 150.

a. 1 ♂. Klong Yai, S.E. Siam. 7 Jan., 1915.

"Iris dark; bill sooty brown, lower mandible dull yellow; feet brownish olive."—C. B. K.

Not hitherto recorded from Siam proper, though it is known from Tenasserim and the northern Malay Peninsula.

Phylloscopus borealis borealis.

Phylloscopus borealis (Blas.); Seebohm, Cat. v. 1887, p. 40; Robinson & Kloss, Ibis, 1911, p. 65; Robinson, Journ. Fed. Malay States Mus. v. 1915, p. 150.

Phylloscopus borealis borealis Hartert, Vög. pal. Faun. i. 1909, p. 517.

a, b. 1 ♂, 1 ♀. Koh Kut I., S.E. Siam. Dec., 1914.

"Iris dark; bill, upper mandible brown, lower yellow; feet brownish yellow."—C. B. K.

Specimens in fairly fresh plumage, with the pale wing-bars well marked.

This race and the more eastern form *P. b. zanthodryas* Swinh. overlap in their winter quarters in Borneo, but, with

one exception obtained on Koh Pennan on May 15th, 1913, all of a large series from the Malay Peninsula seem to be referable to *P. b. borealis*. The above specimen has a wing of about 73 mm., which is larger than any other specimen before us.

***Phylloscopus superciliosus superciliosus*.**

Phylloscopus superciliosus (Gm.); Seebohm, Cat. v. 1881, p. 68; Gyldenstolpe, p. 29; Robinson & Kloss, Ibis, 1911, p. 66.

Phylloscopus superciliosa superciliosa Hartert, Vög. pal. Faun. i. 1909, p. 518; id. Nov. Zool. xvii. 1910, p. 239.

a. 1. Ok Yam, Franco-Siamese Boundary, (on coast). 3 Jan., 1915.

b. 1. Klong Menao, S.E. Siam. 10 Jan., 1915.

“Iris dark; bill brown, lower mandible yellow; tarsi brown, toes yellow.”—C. B. K.

***Phylloscopus tenellipes*.**

Phylloscopus tenellipes Swinh.; Seebohm, Cat. v. 1881, p. 46; Hartert, Vög. pal. Faun. i. 1909, p. 512; id. Nov. Zool. xvii. 1910, p. 241; Robinson & Kloss, Ibis, 1911, p. 65.

a. 1 ♂. Koh Chang I., S.E. Siam. 10 Dec., 1914.

b. 1 ♂. Koh Kut I., S.E. Siam. 30 Dec., 1914.

“Iris dark; bill, upper mandible horny, lower pale fleshy; feet fleshy.”—C. B. K.

This species does not appear to have been hitherto recorded from Siam, though it is known to winter in Tenasserim, the north of the Malay Peninsula, and in Hainan.

***Dicæum cruentatum*.**

Dicæum cruentatum (Linn.); Sharpe, Cat. x. 1885, p. 15; Gyldenstolpe, p. 46.

a-c. 3 ♂. Koh Chang I., S.E. Siam. 6-11 Dec., 1914.

d. 1 ♂. Koh Rang I., S.E. Siam. 21 Dec., 1914.

e. 1 ♂. Koh Kut I., S.E. Siam. 30 Dec., 1914.

f. 1 ♂ imm. Ok Yam, Franco-Siamese Boundary (on coast). 6 Jan., 1915.

“Iris dark; bill and feet black.”—C. B. K.

The male from Koh Kut has the middle of the upper breast flecked with scarlet.

Hartert (Nov. Zool. xvii. 1910, pp. 244-5) recognises three races of this Flower-pecker, viz., *Dicaeum cruentatum* (Linn.) from "India," with the upper wing-coverts "glossy steel-blue" and a slender bill; *D. c. ignitum* (Bergie) from the Malay Peninsula, with the wing-coverts purplish blue; and *D. c. coccineum* (Scop.) from south China and Hainan, with the wing-coverts steel-blue rather more greenish than purplish," with a larger bill and longer wings than the Indian form. I am unable to recognise any constant differences in the above series and in specimens from the Malay Peninsula, which in some instances have the wing-coverts with a very distinct greenish cast. The Siamese specimens have the wing very slightly longer.

Dicaeum chrysorrhœum.

Dicaeum chrysorrhœum Temm.; Sharpe, Cat. x. 1885, p. 44.
a. 1 ♂. Ok Yam, Franco-Siamese Boundary (on coast).
2 Jan., 1915.

"Iris orange; upper mandible black, lower plumbeous; feet slaty black. Associated with the following species in the trees dotting the common land about Ok Yam village."
—C. B. K.

Apparently slightly larger and a little more yellowish above than Malayan specimens, of which, however, not many are available.

Piprisoma modestum modestum.

Prionochilus modestus (Hume); Sharpe, Cat. x. 1885, p. 32.

Piprisoma modestum Oates, Faun. Brit. Ind., Birds, ii. 1890, p. 383; Robinson & Kloss, Ibis, 1911, p. 79.

a-d. 4 ♀. Ok Yam, Franco-Siamese Boundary (on coast). 2 Jan., 1915.

"Iris ochreous; upper mandible sooty, lower plumbeous; feet slaty black."—C. B. K.

These specimens agree with the typical race from Tenasserim and the north of the Malay Peninsula, and not with

the darker and duller form, *Piprisoma m. remotum* from Negri Sembilan, recently described by us (Journ. Federated Malay States Mus. vi. 1915, p. 29).

Æthopyga siparaja cara.

Æthopyga cara Hume, Stray Feath. ii. 1874, p. 473 (note); Gyldenstolpe, p. 42; Robinson, Journ. Fed. Malay States Mus. v. 1915, p. 151.

Æthopyga siparaja (Raffles); Robinson & Kloss, Ibis, 1911, p. 74 (part.).

a. 1 ♂. Koh Chang I., S.E. Siam. Dec., 1914.

b. 1 ♂. Koh Kut I., S.E. Siam. 30 Dec., 1914.

"Iris dark; upper mandible dark brown, lower pale brown; feet brownish black."—C. B. K.

These specimens, as might be expected, are quite typical *Æ. s. cara*, and agree well with others from the islands in the Bight of Bandon.

Anthothreptes malaccensis.

Anthothreptes malaccensis (Scop.); Gadow, Cat. ix. 1884, p. 122; Robinson & Kloss, Ibis, 1911, p. 76; Robinson, Journ. Fed. Malay States Mus. v. 1915, p. 152.

a. 1 ♂. Koh Kut I., S.E. Siam. 29 Dec., 1914.

b. 1 ♂. Klong Menao, S.E. Siam. Jan., 1915.

"Iris ochraceous brown; bill blackish; feet dark olive-brown."—C. B. K.

Leptocoma hasselti.

Cinnyris hasselti (Temm.); Gadow, Cat. ix. 1884, p. 67.

a. 1 ♂. Koh Mehsi, East I., S.E. Siam. 13 Dec., 1914.

b. 1 ♂. Koh Kut I., S.E. Siam. 25 Dec., 1914.

c, d. 2 ♂. Klong Menao, S.E. Siam. 12 Jan., 1915.

e. 1 ♂. Ok Yam, Franco-Siamese Boundary (on coast). 3 Jan., 1915.

"Iris dark; bill and feet black."—C. B. K.

Graculipica nigricollis.

Graculipica nigricollis (Payk.); Sharpe, Cat. xiii. 1890, p. 77; Gyldenstolpe, p. 35.

a-c. 1 ♂, 2 ♀. Lem Ngop, S.E. Siam. 14 Jan., 1915.

“Iris whitish; orbital skin lemon; bill black; feet dirty white with a bluish tinge. Going about in flocks in fairly open country.”—C. B. K.

Æthiopsar grandis.

Acridotheres grandis (Moore); Sharpe, Cat. xiii. 1890, p. 91.

Æthiopsar grandis Gyldenstolpe, p. 36.

a-d. 2 ♂, 2 ♀. Lem Ngop, S.E. Siam. 13-14 Jan., 1914.

“Iris brown; bill and feet yellow. Seen in flocks in cultivated land.”—C. B. K.

Gracula javana intermedia.

Eulabes intermedius (A. Hay); Robinson & Kloss, Ibis, 1911, p. 67; Gyldenstolpe, p. 34.

Gracula intermedius hainanus (Swinh.); Hartert, Nov. Zool. xvii. 1910, p. 251.

Gracula javana intermedia Stresemann, Nov. Zool. xix. 1912, p. 314.

a-e. 3 ♂, 2 ♀. Ok Yam, Franco-Siamese Boundary (on coast). 1-2 Jan., 1915.

f. 1 ♂. Klong Menao, S.E. Siam. Jan., 1915.

“Iris dark; gular skin pale orange, lappets yellow; bill orange-red, tip yellow; feet yellow, lemon or Indian yellow.”—C. B. K.

These specimens are rather smaller than others from Tenasserim and the Siamese States in the Malay Peninsula, and have a rather smaller and lighter bill with narrower lappets, but the differences are not very marked or very constant. The rounded or sharp-pointed end of the bare skin running up from the lappets towards the eye, noted by Hartert, is a very variable character, evidently of no importance.

Oriolus indicus.

Oriolus indicus Jerdon; Hartert, Nov. Zool. xvii. 1910, p. 249.

Oriolus diffusus Sharpe, Cat. iii. 1877, p. 197.

a-c. 2 ♂ ad., 1 ♀ imm. Koh Kut I., S.E. Siam. 29-30 Dec., 1914.

d-g. 1 ♂, 3 ♀. Koh Chang I., S.E. Siam. 5-9 Dec., 1914.

h. 1 ♂ ad. Koh Rang I., S.E. Siam. 21 Dec., 1914.

i, j. 1 ♀ ad., 1 ♀ imm. Ok Yam, Franco-Siamese Boundary (on coast). 2 Jan., 1915.

“*Adult.* Inner ring of iris dull crimson, outer greyish; bill deep fleshy; feet plumbeous. *Immature.* Iris dark; bill fleshy brown; feet plumbeous blue.

“A common bird in fairly open country and occurring less frequently in forest. It has a harsh and very raucous note, and one of its calls we often mistook for that of a small Hawk.”—C. B. K.

Gyldenstolpe did not meet with this species, though he records *O. melanocephalus*, which is not represented in Kloss' collection, as very common over the whole of Siam. Both species are met with in the vicinity of Bangkok (*vide* Williamson, Journ. Nat. Hist. Soc. Siam, i. 1914, p. 43).

Buchanga cineracea mouhoti.

Buchanga mouhoti Walden, Ann. Mag. Nat. Hist. (4) v. 1870, p. 220.

Buchanga cineracea (Horsf.); Sharpe, Cat. iii. 1877, p. 250.

Dicrurus cineraceus (part.) Gyldenstolpe, p. 27.

a-d. 4 ♂. Koh Chang I., S.E. Siam. 5-6 Dec., 1914.

e, f. ♂ ♀. Ok Yam, Franco-Siamese Boundary (on coast). 2 Jan., 1915.

g. ♀. Klong Yai, S.E. Siam. 5 Jan., 1915.

h. ♂. Koh Klum I., S.E. Siam. 18 Dec., 1914.

“Iris crimson, blood-red, orange-red or brownish red; bill and feet black. A common bird in open country where isolated trees and bushes occur.”—C. B. K.

The three female specimens are all decidedly darker and less grey above, with the heads and tail more blackish, and agree well with the description of *B. nigrescens* (Oates, Faun. Brit. Ind., Birds, i. 1889, p. 315). They are, however,

in more worn plumage than the males, while the differences they present from the specimens regarded as *B. c. mouhoti* may also be partly sexual, so that in default of a larger series it would be unsafe to regard the two races as occurring together in the same district.

Buchanga leucogenys.

Buchanga leucogenys Walden; Sharpe, Cat. iii. 1877, p. 251.

Dicrurus leucogenys Robinson & Kloss, Ibis, 1911, p. 72.

a-c. 1 ♂, 2 ♀. Koh Kut I., S.E. Siam. 23-28 Dec., 1914.

d. 1 ♀. Ok Yam, Franco-Siamese Boundary (on coast). 3 Jan., 1915.

"Iris hazel or reddish hazel; bill and feet black. Also observed on Koh Chang."—C. B. K.

Dissemurus paradiseus paradiseus.

Dissemurus paradiseus (Linn.); Sharpe, Cat. iii. 1877, p. 258; Gyldenstolpe, p. 28.

a. ♀. Koh Chang I., S.E. Siam. 10 Dec., 1914.

b. ♀. Klong Yai, S.E. Siam. 5 Jan., 1915.

c. ♀ imm. Klong Menao, S.E. Siam. 9 Jan., 1915.

"Iris crimson or brown; bill and feet black."—C. B. K.

The bird from Siam is the typical race, originally described from Siam by Brisson. Birds from the Malay Peninsula and from Sumatra, Borneo, and Java appear to have the feathers of the crest shorter and somewhat less recurved.

Bhringa remifer.

Bhringa remifer (Temm.); Sharpe, Cat. iii. 1877, p. 257.

a, b. 2 ♀. Klong Menao, S.E. Siam. 9-11 Jan., 1915.

"Iris crimson; bill and feet black.

"In the Malayan region this bird is scarcely met with below 3000 ft., where the previous species is common. In south-east Siam, however, I found both species living side by side at the sea-level."—C. B. K.

With somewhat shorter shafts than is usual in fully developed Malayan birds, but not otherwise differing.

Dicrurus annectans.

Dicrurus annectens (Hodgs.); Sharpe, Cat. iii. 1877, p. 231.

a. 1 ♂ imm. Klong Menao, S.E. Siam. 12 Jan., 1915.

“Iris crimson brown; bill and feet sooty black.”—C. B. K.

The specimen is quite immature, but judging by the more even tail it appears to be referable to this species. *D. ater* (Hermann) is much the commoner bird in Siam, the present species being probably only a winter visitor.

Corvus macrorhynchus.

Corvus macrorhynchus Wagl; Robinson & Kloss, Ibis, 1911, p. 71; Gyldenstolpe, p. 18.

a, b. 1 ♂, 1 ♀. Ok Yam, Franco-Siamese Boundary (on coast). 3 Jan., 1915.

“Iris dark; bill and feet black. Occurring in moderate numbers about the villages, but nowhere so numerous as in Bangkok.”—C. B. K.

These specimens are rather small and dull in colour, with the throat hackles poorly developed; they belong to this species and not to *Corvus compilator* Richmond (*C. enca*, auct.).

XXXVIII.—*The Avifauna of Central America: a Study in Geographical Distribution.* By W. P. PYCRAFT, British Museum, Natural History*.

THE composite character of the Avifauna of Central America—the admixture of elements from the adjacent land-areas north and south thereof—is a feature which experience of the phenomena of geographical distribution would lead us to expect. No less readily would it have been possible to foretell that this region would show a greater affinity with South than with North America. The following review is therefore more particularly designed to furnish an analysis of the component elements of this Avifauna, in order, if possible, to discover the factors which have determined its composition.

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